

PATENT
Attorney Docket No. NL040001US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
DE MAAGT, Bennie Josephus et al.) Group Art Unit: 2879
Application No.: 10/596,756) Examiner: BOWMAN, Mary Ellen
Filed: June 23, 2006) Confirmation No.: 1204
For: COMPACT HIGH-PRESSURE)
DISCHARGE LAMP AND)
METHOD OF MANUFACTURING)

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Sir:

APPEAL BRIEF UNDER BOARD RULE § 41.37

In support of the Notice of Appeal filed April 30, 2009, and further to Board Rule 41.37, Appellant presents this brief and encloses herewith the fee of \$540.00 required under 37 C.F.R. § 1.17(c).

This Appeal responds to the January 14, 2009, final rejection of claims 1-14 and the Advisory Action dated March 18, 2009.

If any additional fees are required or if the enclosed payment is insufficient, Appellant requests that the required fees be charged to Deposit Account No. 06-0916.

Table of Contents

Real Party In Interest.....	3
Related Appeals and Interferences	4
Status Of Claims	5
Status Of Amendments	6
Summary Of Claimed Subject Matter.....	7
Grounds of Rejection to be Reviewed on Appeal.....	13
Argument.....	14
I. The 35 U.S.C. §103(a) rejection of claims 1-4, 6, and 9-14 as being unpatentable over <u>Toia</u> in view of <u>Nagasawa</u> and <u>Deguchi</u> is improper	14
A. The Office has misconstrued the disclosure of Toia, which does not teach or suggest each and every element of the appealed claims.....	16
B. Nagasawa does not cure the deficiencies of Toia	20
C. Deguchi does not cure the deficiencies of Toia and Nagasawa	24
D. Conclusion	26
II. The 35 U.S.C. §103(a) rejection of claim 5 as being unpatentable over Toia in view of <u>Nagasawa</u> , <u>Deguchi</u> , and <u>Tu</u> is improper	27
III. The 35 U.S.C. §103(a) rejection of claim 7 as being unpatentable over Toia in view of <u>Nagasawa</u> , <u>Deguchi</u> , and <u>Barthelmes</u> is iproper.....	30
IV. The 35 U.S.C. §103(a) rejection of claim 8 as being unpatentable over Toia in view of <u>Nagasawa</u> , <u>Deguchi</u> , <u>Barthelmes</u> , and <u>Niimi</u> is iproper	32
V. Conclusion	35
Claims Appendix to Appeal Brief Under Rule 41.37(c)(1)(viii).....	36
Evidence appendix to Appeal Brief Under Rule 41.37(c)(1)(ix)	40
Related Proceedings Appendix to Appeal Brief Under Rule 41.37(c)(1)(x).....	41

Real Party In Interest

Koninklijke Philips Electronics N V is the real party in interest, as reflected in the Recordation of Assignment recorded June 23, 2006 at REEL: 017831; FRAME 0349.

Related Appeals and Interferences

There are currently no other appeals or interferences, of which Appellant, Appellant's legal representative, or Assignee are aware, that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status Of Claims

Claims 1-14 are pending in this application.

Claims 1-14 are finally rejected by the Office, and Appellant hereby appeals the rejection of these claims. See Final Office Action dated January 14, 2009. Pursuant to 37 C.F.R. § 41.37(c)(1)(iii) and (iv), the attached appendix contains a clean copy of the claims involved in this Appeal.

Status Of Amendments

In response to the Final Rejection mailed January 14, 2009, Appellant filed an “Amendment and/or Response After Final Action” on March 5, 2009 (the “Response”). In that Response, Appellant presented minor amendments to claim 10. In an Advisory Action mailed March 18, 2009, the Examiner stated that “[f]or the purposes of appeal, the proposed amendment [filed March 5, 2009] will be entered” Thus, the claims on appeal are those presented in the Response.

Summary Of Claimed Subject Matter

The claimed invention generally relates to novel high-pressure discharge lamps comprising, *inter alia*, an outer envelope, a discharge vessel arranged in the outer envelope and enclosing a discharge space, and a getter provided in the outer envelope. See claim 1; As-filed Specification, page 2, lines 6-20. The claimed invention also relates to methods for manufacturing such novel high pressure discharge lamps. See claim 11; As-filed Specification, page 4, line 27 - page 5, line 9.

High-pressure discharge lamps have become popular for retail lighting applications. See As-filed Specification, page 1, lines 6-7. Generally, high-pressure discharge lamps include a discharge vessel formed from a ceramic or quartz. See *id.* at lines 13-15. Typically, the discharge vessel contains various metal halides in addition to mercury (Hg) and a rare gas filling. See *id.* at lines 16-17.

High pressure discharge lamps have been manufactured with an outer envelope that contains the discharge vessel. See *id.* at page 2, lines 29-34. During the manufacturing process, a nitrogen atmosphere is created between the discharge vessel and the inner wall of the outer envelope, after which the outer envelope is sealed. See *id.* at lines 21-23. In known discharge lamps, a desired vacuum is established in the outer envelope by pumping residual gases from the envelope through an exhaust tube. See *id.* at lines 29-34. However, the pumping process takes considerable time, and sealing the exhaust tube after pumping gives the finished discharge lamp an undesirable visual appearance. See *id.* Moreover, Appellant observed that traditional pumping processes are not easily used to remove residual gases from the envelope of

relatively small lamps, such as those having an outer envelope volume less than or equal to 2cc. See *id.* at page 2, line 34-page 3, line 2.

After considerable research in this area, Appellant discovered that the problems associated with traditional high pressure discharge lamps may be overcome by activating a getter material placed in the outer envelope. When activated, the getter "pumps" the outer envelope in a relatively short period of time, and before the discharge lamp is put into operation. See *id.* at page 3, lines 3-6. Typically, the getter material is substantially free of nitrogen prior to activation. See *id.* at lines 11-12. After activation, the nitrogen content of the getter material is at least 2.5 mbar.mil. See *id.* at lines 12-13.

Therefore, one aspect of the claimed invention (claim 1), relates to a high-pressure discharge lamp. Claim 1 recites:

1. A high-pressure discharge lamp comprising:

an outer envelope in which a discharge vessel is arranged around a longitudinal axis,

the discharge vessel enclosing, in a gastight manner, a discharge space provided with an ionizable filling,

the discharge vessel having a first and a second mutually opposed neck-shaped portion through which a first and a second current supply conductor, respectively, extend to a pair of electrodes arranged in the discharge space,

a lamp base of electrically insulating material supporting the discharge vessel via the first and second current supply conductors,

the lamp base also supporting the outer envelope,

the outer envelope enclosing the first and second current supply conductors,

a getter being provided in the outer envelope,

the outer envelope having a volume equal to or less than 2cc, and

the getter comprising at least 2.5 mbar.mil nitrogen.

The as-filed specification supports each element of claim 1, as demonstrated in the following chart of exemplary specification citations.

Element of claim 1	Supporting portions of specification (not exhaustive)
A high-pressure discharge lamp comprising:	Page 2, lines 4-5; page 4, lines 27-29; page 6, line 20 - page 7, line 3; original claim 1; Figs. 1A, 1B, and 2
an outer envelope in which a discharge vessel is arranged around a longitudinal axis,	Page 2, lines 6-7; page 4, line 30, page 5, lines 31-32; page 6m lines 20-24; original claim 1; Figs. 1A, 1B, and 2
the discharge vessel enclosing, in a gastight manner, a discharge space provided with an ionizable filling,	Page 2, lines 8-9; page 4, lines 33-34; page 6, lines 24-26; original claim 1; Figs. 1A, 1B, and 2
the discharge vessel having a first and a second mutually opposed neck-shaped portion through which a first and a second current supply conductor, respectively, extend to a pair of electrodes arranged in the discharge space,	Page 2, lines 10-12; page 5, lines 1-3; page 6, lines 26-30; original claim 1; Figs. 1A, 1B, and 2
a lamp base of electrically insulating material supporting the discharge vessel via the first and second current supply conductors,	Page 2, lines 13-14; page 5, lines 4-5; page 6, lines 30-31; original claim 1; Figs 1A, 1B, and 2
the lamp base also supporting the outer envelope,	Page 2, line 15; page 5, line 6; page 6, lines 31-32; original claim 1; Figs. 1A, 1B, and 2
the outer envelope enclosing the first and second current supply conductors,	Page 2, line 16; page 5, line 7; original claim 1; Figs. 1A, 1B, and 2
a getter being provided in the outer envelope,	Page 2, line 17; page 5, line 8; page 7, lines 28-30; original claim 1; Figs. 1A, 1B, and 2

the outer envelope having a volume equal to or less than 2cc, and	Page 2, line 18; page 5, lines 8-9; page 6, line 33; original claim 1
the getter comprising at least 2.5 mbar.mil nitrogen.	Page 2, line 19; page 3, lines 12-13; page 5, lines 12 and 31-32; original claim 1

Another aspect of the claimed invention (claim 11), relates to a method of manufacturing a high-pressure discharge lamp. Claim 11 recites:

11. A method of manufacturing a high-pressure discharge lamp, the compact high pressure discharge lamp comprising:

an outer envelope in which a discharge vessel is arranged around a longitudinal axis,

the discharge vessel enclosing, in a gastight manner, a discharge space provided with an ionizable filling,

the discharge vessel having a first and a second mutually opposed neck-shaped portion through which a first and a second current supply conductor, respectively, extend to a pair of electrodes arranged in the discharge space,

a lamp base of electrically insulating material supporting the discharge vessel via the first and second current supply conductors,

the lamp base also supporting the outer envelope,

the outer envelope enclosing the first and second current supply conductors,

a getter being provided in the outer envelope,

the outer envelope having a volume equal to or less than 2cc, and

the method including:

activating the getter for reducing the amount of nitrogen in the outer envelope, and

after activation of the getter comprising at least 2.5 mbar.mil nitrogen.

The as-filed specification supports each element of claim 11, as demonstrated in the following chart of exemplary specification citations.

Element of claim 11	Supporting portions of specification (not exhaustive)
A method of manufacturing a high-pressure discharge lamp, the compact high-pressure discharge lamp comprising:	Page 2, lines 4-5; page 4, lines 27-29; page 6, line 20 - page 7, line 3; original claim 11; Figs. 1A, 1B, and 2
an outer envelope in which a discharge vessel is arranged around a longitudinal axis,	Page 2, lines 6-7; page 4, line 30, page 5, lines 31-32; page 6m lines 20-24; original claim 11; Figs. 1A, 1B, and 2
the discharge vessel enclosing, in a gastight manner, a discharge space provided with an ionizable filling,	Page 2, lines 8-9; page 4, lines 33-34; page 6, lines 24-26; original claim 11; Figs. 1A, 1B, and 2
the discharge vessel having a first and a second mutually opposed neck-shaped portion through which a first and a second current supply conductor, respectively, extend to a pair of electrodes arranged in the discharge space,	Page 2, lines 10-12; page 5, lines 1-3; page 6, lines 26-30; original claim 11; Figs. 1A, 1B, and 2
a lamp base of electrically insulating material supporting the discharge vessel via the first and second current supply conductors,	Page 2, lines 13-14; page 5, lines 4-5; page 6, lines 30-31; original claim 11; Figs 1A, 1B, and 2
the lamp base also supporting the outer envelope,	Page 2, line 15; page 5, line 6; page 6, lines 31-32; original claim 11; Figs. 1A, 1B, and 2
the outer envelope enclosing the first and second current supply conductors,	Page 2, line 16; page 5, line 7; original claim 11; Figs. 1A, 1B, and 2
a getter being provided in the outer envelope,	Page 2, line 17; page 5, line 8; page 7, lines 28-30; original claim 11; Figs. 1A, 1B, and 2
the outer envelope having a volume equal to or less than 2cc, and	Page 2, line 18; page 5, lines 8-9; page 6, line 33; original claim 11

the method including: activating the getter for reducing the amount of nitrogen in the outer envelope and	Page 5, lines 10-12 and 31-32; original claim 11
after activation of the getter comprising at least 2.5 mbar.mil nitrogen.	Page 2, line 19; page 3, lines 12-13; page 5, lines 12 and 31-32; original claim 11

Grounds of Rejection to be reviewed on Appeal

A. Claims 1-4, 6, and 9-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,521,014 to Toia et al. (“Toia”) in view of U.S. Patent No. 5,432,399 to Nagasawa et al. (“Nagasawa”), and further in view of Japanese Publication No. JP 2004220880 to Deguchi et al. (“Deguchi”).^{1, 2} Final Office Action dated January 14, 2009, pages 2-9.

B. Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable of Toia in view of Nagasawa and Deguchi, and further in view of U.S. Patent No. 6,586,878 to Tu (“Tu”). See *id.* at page 9.

C. Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Toia in view of Nagasawa and Deguchi, and further in view of U.S. Patent No. 5,037,342 to Barthelmes et al. (“Barthelmes”). See *id.* at pages 9-10.

D. Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Toia in view of Nagasawa, Deguchi, and Barthelmes, and further in view of U.S. Patent Application Publication No. 2002/0060520 to Niimi (“Niimi”). See *id.* at page 10.

Appellant appeals each of these grounds of rejection.

¹ The statement of rejection on page 2 of the Final Office Action dated January 14, 2009, only indicates that claims 1-4 and 11-14 are rejected under 35 U.S.C. § 103(a) by a combination of Toia, Nagasawa, and Deguchi. However, it is clear from pages 7 and 8 of the Final Office Action that claims 6, 9, and 10 also stand rejected on this ground.

² The Examiner relies on a machine translation of Deguchi in the Final Office Action dated January 14, 2009. All references herein to Deguchi are to the machine translation.

Argument

Each claim of the present application is separately patentable, and upon issuance of a patent will be entitled to a separate presumption of validity under 35 U.S.C. §282.

Appellant traverses each of the applied grounds of rejection for at least the following reasons:

I. THE 35 U.S.C. §103(a) REJECTION OF CLAIMS 1-4, 6, AND 9-14 AS BEING UNPATENTABLE OVER TOIA IN VIEW OF NAGASAWA AND DEGUCHI IS IMPROPER

According to the Office, claims 1-4, 6, and 9-11 are unpatentable over a combination of Toia, Nagasawa, and Deguchi. See Final Office Action dated January 14, 2009, pages 2-9. In particular, the Office alleges that Toia discloses each and every element of claims 1 and 11, except for the “. . . specific components of a discharge lamp . . .” and the volume of the outer envelope recited in independent claims 1 and 11. *Id.* at 4-6. In an attempt to correct the deficiencies of Toia, the Office relies on Nagasawa and Deguchi. See *id.*

Specifically, the Office alleges that “. . . it would have been obvious to one of ordinary skill in the art to include the . . . components [of Nagasawa's high pressure discharge lamp (“HPDL”)] in a discharge lamp as mentioned in . . . Toia, because said components provide the well known benefit of powering a discharge lamp to produce light.” *Id.* at 5. Further, the Office states that “. . . it would have been obvious to one of ordinary skill in the art to utilize an outer envelope of 2 cc's or less as taught by Deguchi, because such a small lamp has the well known benefit of use in a variety of applications that require small size, such as . . . headlights.” *Id.* at 6.

Appellant respectfully disagrees with and traverses this rejection for at least the following reasons.

The Office bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. See M.P.E.P. § 2142. In *KSR Int'l Co. v. Teleflex Inc.*, 82 U.S.P.Q.2d 1385 (2007), the Supreme Court confirmed that the “framework for applying the statutory language of §103” was still based on its landmark decision in *Graham v. John Deere Co. of Kansas City*, 148 U.S.P.Q. 459 (1966). Under *Graham*, there are four factors for consideration when determining whether an invention is obvious:

- (1) the scope and content of the prior art;
- (2) the differences between the prior art and the claims at issue;
- (3) the level of ordinary skill in the art; and
- (4) secondary considerations.

148 U.S.P.Q. at 467. The obviousness or non-obviousness of the claimed invention is then evaluated in view of the results of these inquiries. See *Graham*, 148 U.S.P.Q. 467; see also *KSR*, 82 U.S.P.Q. 2d at 1388. As articulated in *KSR*, part of this evaluation involves determining “whether there was an apparent reason to combine” the prior art elements relied upon to establish obviousness. 82 U.S.P.Q. 2d at 1369. Implicit in this analysis is the requirement that the Office show that each and every element of the rejected claims is disclosed in the prior art. M.P.E.P. § 2143.03.

Further, the Supreme Court in *KSR* also held that “[t]here is no necessary inconsistency between the idea underlying the TSM [teaching, suggestion, motivation] test and the *Graham* analysis.” M.P.E.P. §2141(III) (rev. 6, Sept. 2007), citing *KSR* at

82 U.S.P.Q. 2d at 1396. Appellant understands this to mean that when applicable, as here, TSM reasoning may still be applied not only by an examiner but also by Appellant to refute a §103 rejection.

Here, Appellant respectfully disagrees with and traverses the Office's position, at least because the Office has not met the burdens necessary to establish a *prima facie* case of obviousness. In particular, the Office has not demonstrated that Toia, Nagasawa, and Deguchi, whether considered alone or in combination, teach or suggest each and every element of appealed claims 1-4, 6, and 9-14.

A. The Office has misconstrued the disclosure of Toia, which does not teach or suggest each and every element of the appealed claims

Toia discloses "non-evaporable getter alloys ["NEG alloys"] which provide for a high efficiency in the sorption of gases, particularly of nitrogen." Toia, column 1, lines 5-7. The disclosed ". . . NEG alloys can be used for removing the above gases when they are present in traces inside other gases, generally noble gases. An example is in the use in lamps, particularly the fluorescent ones which are filled with noble gases . . . wherein the NEG alloy has the purpose of removing traces of oxygen, water, hydrogen, and other gases, thus maintaining the suitable atmosphere for lamp functioning . . ."

Id. at lines 19-26.

However, Toia fails to disclose the features of *any* high-pressure discharge lamp (or method for manufacturing a high-pressure discharge lamp), and certainly does not disclose a high-pressure discharge lamp (or method of manufacturing such a lamp) including the features recited in independent claims 1 and 11. The Office admits this fact. See Final Office Action dated January 14, 2009, page 4 ("Toia fails to teach the specific components of a discharge lamp"). Thus, Toia clearly does not teach or

suggest each and every element of independent claims 1 and 11, much less dependent claims 2-4, 6, 9, 10, and 12-14. Indeed, apart from disclosing “a” getter material that may be used in “lamps” Toia does not disclose *any* of the features of the appealed claims.

In addition, Appellant submits that the Office’s allegation that Toia teaches “a discharge lamp . . . comprising: a getter being provided in the outer envelope . . . the getter comprising at least 2.5 mbar.mil nitrogen . . .” (*Id.* (original bolding deleted)) is not tenable for at least the following reasons.

First, as explained above Toia discloses the use of NEG materials “in lamps, particularly the fluorescent ones which are filled with noble gases . . . wherein the NEG alloy has the purpose of removing traces of oxygen, water, and other gases, thus maintaining the suitable atmosphere for the lamp functioning . . .” Toia, column 1, lines 21-26. While a fluorescent lamp is “a” discharge lamp, it is well known in the art that the construction and principles of operation of a fluorescent lamp are not related to the construction and principles of operation of a high-pressure discharge lamp. With this in mind, Toia’s disclosure is conspicuously devoid of any reference to high-pressure discharge lamps, methods for making such lamps, or the use of a getter in such lamps/methods.

Furthermore, in view of the well-known differences between fluorescent and high-pressure discharge lamps, Toia’s indication that NEG materials may be used in a fluorescent lamp would not suggest to one of ordinary skill in the art that such materials could or should be used in a high-pressure discharge lamp. Indeed, nothing in Toia teaches or suggests that using a getter in a high-pressure discharge lamp would

provide any beneficial result. Accordingly, the Office's position that Toia suggests the use of getter materials in discharge lamps (and in particular high-pressure discharge lamps) is unfounded, and reflects a clear misunderstanding of the contents and implications of the reference.

Second, Toia does not teach ". . . a getter being provided in the outer envelope . . ." of a discharge lamp as claimed. See, e.g., claims 1 and 11; Final Office Action dated January 14, 2009, page 3. Again, Toia does *not* describe the structure of *any* high-pressure discharge lamp, and therefore also fails to disclose providing a getter material with respect to any part of a high-pressure discharge lamp structure. Likewise, Toia provides no information suggesting the use of a getter "in the outer envelope" of a high-pressure discharge lamp, as claimed. See claim 1 and 11.

Of course, Appellant recognizes the Office's position that Toia suggests the use of a getter material "in lamps[,] which is "considered to mean within lamps, which is synonymous with in the outer envelope because all of the components [of the lamp] are in the outer envelope." Final Office Action dated January 14, 2009, page 3 (internal quotations omitted). Appellant respectfully disagrees, at least because Toia's disclosure does not support the Office's position.

While Toia mentions the use of a getter in "lamps," and other devices/processes (e.g., microelectronics manufacturing), the only specific lamp application Toia discloses is the use of an NEG material in fluorescent lamps. See Toia, column 1, lines 22-25. The getter is used ". . . for the purpose of removing traces of oxygen, water, hydrogen, and other gases, thus *maintaining that suitable atmosphere for lamp functioning.*" Toia, column 1, lines 22-25 (emphasis added). One of ordinary skill in the art would

understand that by specifying that the purpose of the getter is to maintain a suitable atmosphere for the functioning of a fluorescent lamp, Toia suggests that NEG materials should be placed *within the discharge space* of a fluorescent lamp. However, Toia provides no information that teaches or suggests a “. . . a getter being provided *in the outer envelope . . .*” of a high-pressure discharge lamp that includes “an outer envelope in which a discharge vessel is arranged . . . the discharge vessel enclosing . . . a discharge space . . .” as recited in claims 1 and 11. That is, Toia never discloses providing a getter “*in the outer envelope*” of a discharge lamp, which is a location distinct from the claimed “discharge space[.]” Claims 1 and 11.

Finally, Appellant respectfully disagrees with the Office’s position that Toia teaches a discharge lamp that includes a getter comprising at least 2.5 mbar.mil of nitrogen. See Final Office Action dated January 14, 2009, page 3. The Office points to Figure 9 of Toia to support its position. See *id.* However, Figure 9 of Toia (as well as the other portions of the reference) does not reflect the amount of nitrogen that is comprised within a getter than is “provided in the outer envelope” of a high pressure discharge lamp, as claimed. Rather, Figure 9 of Toia discloses the amount of nitrogen absorbed by certain NEG materials when they are placed in a controlled atmosphere and tested according to ASTM F798-82. See Toia, columns 6 and 7, examples 4, and 13, and 14.

Thus, the evidence relied on by the Office in the Final Office action merely demonstrates the *capability* of Toia’s getter materials to absorb a certain level of nitrogen when exposed to certain *controlled conditions*. See *id.* (emphasis added). Nowhere does Toia teach or suggest a getter having the claimed nitrogen content, and

which is provided in the outer envelope of a high-pressure discharge lamp having the features recited in the appealed claims. See, e.g., claims 1 and 11.

In summary, Toia discloses getter alloys, but does not teach or suggest the use of such alloys in *any* high pressure discharge lamp. Toia also provides no information regarding the structural features of *any* high-pressure discharge lamp. Therefore the Office's position that "Toia teaches a discharge lamp . . . comprising: a getter being provided in the outer envelope . . . the getter comprising at least 2.5 mbar.mil nitrogen . . ." is not supported by the disclosure of Toia. Final Office Action dated January 14, 2009, page 3. Finally, for the same reasons given above, Toia clearly does not teach any of the features of method claim 11, or the claims dependent thereon.

B. Nagasawa does not cure the deficiencies of Toia

Nagasawa fails to cure the deficiencies of Toia, at least because it too fails to teach or suggest each and every element of the appealed claims. Moreover, Nagasawa provides no information that explains *why* one of ordinary skill in the art would have attempted to modify Toia's disclosure in an attempt to arrive at the claimed invention.

Nagasawa relates to "a discharge lamp apparatus . . . in which an arc tube, in the form of a discharge lamp body having opposed discharge electrodes received in an enclosed glass bulb, is supported by a lead support projecting from an insulating base made of a synthetic resin." Nagasawa, column 1, lines 8-15 and Figs. 1-4. However, Nagasawa fails to disclose the use of any getter, and certainly does not disclose "a getter being provided in the outer envelope" of a high-pressure discharge lamp, wherein the getter comprises "at least 2.5 mbar.mil nitrogen[,] as recited in claims 1 and 11. Indeed, a Boolean text search revealed that the word "getter" never appears in

Nagasaki's disclosure. Further, and as admitted by the Office, Nagasaki does not disclose a high-pressure discharge lamp having an outer envelope with a "volume equal to or less than 2cc," as claimed. See claim 1; Final Office Action dated January 14, 2009, page 6.

Thus, Nagasaki fails to teach or suggest a high pressure discharge lamp or a method of manufacturing a high pressure discharge lamp having each and every feature of independent claims 1 and 11. Nagasaki also fails to provide any information that explains *why* one of ordinary skill would see any reason to include a getter in a high-pressure discharge lamp. Indeed, in addition to being silent with respect to the use of any getter, Nagasaki provides no information regarding the atmosphere within the globe (outer envelope) of its discharge lamp. Thus, one of ordinary skill would see no benefit to adding Toia's getter (which functions to control the concentration of certain components in a controlled atmosphere) into Nagasaki's discharge lamp or vice versa.

Of course, Appellant acknowledges the Office's position that 'it would have been obvious to one of ordinary skill in the art to include . . . [Nagasaki's] components in a discharge lamp as mentioned in . . . Toia, because said components . . . provide a discharge lamp to produce light.' Final Office Action, page 5. Appellant disagrees with the Office for at least the following reasons.

First, Toia and Nagasaki are drawn to fundamentally different types of lamps namely, fluorescent lamps (Toia) and arc-discharge lamps (Nagasaki). Neither of those references, however, provide any information that explains *why* one of ordinary skill would combine Toia's getter, which is described as useful for controlling the atmosphere of a fluorescent lamp, with Nagasaki's arc-discharge lamp, which operates

in a fundamentally different way than a fluorescent lamp. Thus, one of ordinary skill would see no benefit in adding a getter material to Nagasawa's lamps (or adding Nagasawa's lamp components to Toia's getter), much less to specifically provide a getter “. . . in the outer envelope,” of a high-pressure discharge lamp, as recited in appealed claims 1 and 11.

Second, as explained above, Toia's disclosure would suggest to one of ordinary skill in the art that the disclosed getter materials should be placed in the *discharge space* of a fluorescent lamp, as opposed to providing a getter material “within the outer envelope” of a high-pressure discharge lamp as recited in claims 1 and 11. Thus, even if, *arguendo*, it would have been obvious to combine Nagasawa's lamp with Toia's getter alloys (which Appellant does not concede), one of ordinary skill would have been lead to provide the getter in the *discharge space* (i.e., within the space defined by bulb 12) of Nagasawa's lamp, which is not equivalent to providing “a getter . . . in the outer envelope . . .” of a high-pressure discharge lamp, as recited in claims 1 and 11. Thus, if anything, Nagasawa and Toia would lead one or ordinary skill in the art at the time the invention was made to form a lamp that is outside the scope of the appealed claims.

Third, because Nagasawa is silent with respect to the use of *any* getter, Nagasawa does not correct Toia's failure to teach or suggest the use of a “getter comprising at least 2.5 mbar/ml nitrogen” that is “provided in the outer envelope” of a “high-pressure discharge lamp” as claimed. Claims 1, and 11. Thus, *any* combination of Nagasawa and Toia would still fail to teach or suggest a “getter comprising at least 2.5 mbar/ml nitrogen” that is “provided in the outer envelope” of a “high-pressure discharge lamp,” as claimed. *Id.*

It would also be inappropriate for the Office to assert that a getter present in a lamp resulting from the combination of Toia and Nagasawa would *necessarily* or *inherently* contain the claimed amount of nitrogen. At a minimum, Toia and Nagasawa both fail to suggest the use of a getter material that contains the claimed amount of nitrogen in a high pressure discharge lamp. Further, nitrogen is generally acquired by a getter after activation at a specified temperature. See Specification, page 3, lines 11-13; Toia, column 6, lines 3-15. Accordingly, the amount of nitrogen a getter could absorb in after activation in a lamp would depend at least in part in the composition of the atmosphere in which the getter is disposed. With this in mind, Nagasawa is silent with respect to the composition of the atmosphere contained within its disclosed globe.

Thus, even if one of ordinary skill would provide Toia's getter alloys the space defined by the globe of Nagasawa's lamp (which again, Appellant does not concede), there is no basis for the Office to assert that the getter in such a combination would *necessarily* comprise the claimed amount of nitrogen. Indeed, it is well established that “[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic.” M.P.E.P. § 2112(IV) (citing *in re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (emphasis added).

For at least the foregoing reasons, Appellant maintains that Toia and Nagasawa, whether considered alone or in combination, fail to teach or suggest each and every element of the appealed claims. Further, Toia, and Nagasawa do not provide any information that supports a tenable rationale explaining *why* one of ordinary skill would

have modified or combined the references in an attempt to arrive at the claimed invention.

C. Deguchi does not cure the deficiencies of Toia and Nagasawa

Deguchi fails to cure the deficiencies of Toia and Nagasawa described above. Deguchi generally relates to headlights for vehicles that use a high-pressure discharge lamp. See Deguchi, paragraph [0001]. In particular, Deguchi describes high-pressure discharge lamps that include a “tight container” that includes a discharge space having a volume of 0.1cc or less, and an outer tube consisting of silica glass or high silicate glass. See *id.* at paragraphs [0015] and [0036].

Deguchi is silent, however, with respect to the use of any getter materials, and certainly does not disclose a high-pressure discharge lamp (or method for making the same) “comprising: an outer envelope in which a discharge vessel is arranged . . . [and] a getter being provided in the outer envelope . . . the getter comprising at least 2.5 mbar.mil nitrogen” as recited in claims 1 and 11. For at least this reason, Deguchi does not provide any information explaining *why* one of ordinary skill in the art would modify Toia and Nagasawa in an attempt to arrive at the claimed invention, e.g., to incorporate a getter having the claimed composition into a high-pressure discharge lamp or manufacturing method, and to provide the getter “in the outer envelope” of the lamp. See claims 1 and 11.

Appellant also respectfully disagrees with the Office’s position that Deguchi teaches or suggests a high-pressure discharge lamp with an “outer envelope having a volume of equal or less than 2 cc.” Final Office Action dated January 14, 2009, page 6. According to the Office, the volume of Deguchi’s “outer envelop [i.e. outside pipe] and

. . . discharge vessel [i.e. airtight container] are related to their inside diameters by the equation $\pi r^2 l$ (where r is half the inside diameter and l is the length of the tube)" *Id.* Using this calculation, the Office asserts that "[s]ince the volume of the discharge vessel is 0.025 ccs, the volume of the outer envelope would necessarily be on the order of 0.2cc's, which is within the range of the claimed 2ccs or less." *Id.*

Appellant disagrees, at least because Deguchi does not appear to disclose the length or the volume of its outer tube (which the Office equates to the claimed outer envelope). As a result, the variables V and l in the formula $V = \pi r^2 l$ appear to be *undefined* for Deguchi's outer tube. Without further explanation as to how either of these variables may be derived from Deguchi's disclosure, Appellant submits that the Office's position that "the volume of . . . [Deguchi's] outer envelope would necessarily be on the order of 0.2cc's" is not supported by facts or parameters provided within the four corners of the cited references.

Rather, the Office's position is merely a guess, as to what the volume of Deguchi's outer tube *might* be. With this in mind, based on Deguchi's disclosure of an outer tube having an inner diameter of 7 mm (0.7 cm) (See Deguchi, paragraph [0067]) and the formula relied on by the Office, one can easily calculate that Deguchi's outer tube need only be greater than or equal to about 1.3cm long to have a volume greater than 2cc.³

³ $V = \pi r^2 l$. If $V = 2cc$ (i.e., 2 cm^3) and $r = 0.7\text{cm}$, than $2cc = 1.536\text{cm}^2(l)$, and $l = 1.30 \text{ cm}$. Of course, this exemplary calculation is does not account for the volume of Deguchi's discharge container (inner tube). However, it illustrates that without knowing the volume or length parameters of Deguchi's outer tube, it cannot be said that Deguchi's outer tube necessarily has a volume of equal to or less than 2cc, as asserted by the Office.

Thus, it is clear that Deguchi, like Toia and Nagasawa, fails to teach or suggest each and every element of the appealed claims. In particular, Deguchi does not teach or suggest a high-pressure discharge lamp (or method of manufacturing the same) comprising a “getter comprising at least 2.5 mbar/ml nitrogen” that is “provided in the outer envelope” of a “high-pressure discharge lamp,” as claimed. See claims 1 and 11. Nor does Deguchi teach or suggest high-pressure discharge lamps having an outer envelope with a volume of equal to or less than 2cc, as claimed. See *id.* In sum, Deguchi does not cure the deficiencies of Toia and Nagasawa.

D. Conclusion

For at least the foregoing reasons, Appellant maintains that Toia, Nagasawa, and Deguchi, whether considered alone or in combination, fail to teach or suggest each and every element of the appealed claims. Further, because none of the references teach or suggest the use of a getter comprising 2.5 mbar.mil of nitrogen, any combination of Toia, Nagasawa, and Deguchi would still fail to teach or suggest each and every element of the appealed claims. Thus, the burden remains on the Office to explain *why* one of ordinary skill would have modified and/or combined Toia, Nagasawa, and Deguchi in an attempt to arrive at the claimed invention, when the references do not teach or suggest such combination/modification, or each and every element of the pending claims. See *KSR*, 82 U.S.P.Q.2d at 1369.

Appellant therefore submits that the 35 U.S.C. § 103(a) rejection of claims 1-4, 6, and 9-14 as being allegedly unpatentable over Toia, Nagasawa, and Deguchi is improper, and should be withdrawn.

II. THE 35 U.S.C. §103(a) REJECTION OF CLAIM 5 AS BEING UNPATENTABLE OVER TOIA IN VIEW OF NAGASAWA, DEGUCHI, AND TU IS IMPROPER

The Office alleges that claim 5 is unpatentable over a combination of Toia, Nagasaki, Deguchi, and Tu. See Final Office Action dated January 14, 2009, page 9. Though acknowledging that Toia, Nagasaki, and Deguchi “fail to teach the position of the getter[,]” the Office asserts that Tu cures this deficiency. See *id.* Specifically, the Office states that “. . . Tu teaches the material of the getter is provided to a connection conductor connected to the second supply conductor and running alongside the discharge vessel (getters 31 and 37 . . .). *Id.* (original bolding removed) From this, the Office reasons that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the getter of the combined references on a connection conductor, as taught by Tu, because the placement of the getter ensures uniform voltage characteristics within the lamp.” *Id.*

Appellant respectfully disagrees with and traverses the Office’s position for at least the following reasons.

The deficiencies of Toia, Nagasaki, and Deguchi with respect to independent claims 1 and 11 is described above in section I, and for the sake of brevity will not be repeated. In summary, Appellant maintains that Toia, Nagasaki, and Deguchi, whether considered alone or in combination, do not teach or suggest a high-pressure discharge lamp (or method of manufacturing the same) comprising a “getter comprising at least 2.5 mbar/mil nitrogen” that is “provided in the outer envelope” of a “high-pressure discharge lamp,” as claimed, or an outer envelope having the claimed volume.

Tu does not cure the deficiencies of Toia, Nagasaki, and Deguchi. At a minimum, Tu fails to teach or suggest a high-pressure discharge lamp (or method of

manufacturing the same) "comprising: . . . a getter . . . comprising at least 2.5 mbar.ml nitrogen[,] as recited in claims 1, and 11. Rather, the Tu's disclosed getter functions "to absorb impurities in the inert gas or nitrogen which fills the space between the arc tube and the outer envelope." Tu, column 1, lines 1, lines 12-14 (emphasis added). In this regard, Tu suggests the use of a "ST-101" getter alloy, which is "widely used in metal halide lamps . . . to absorb impurities such as *hydrogen, water vapor, and hydrocarbons.*" *Id.* at 15-18 (emphasis added).⁴ Tu is silent with respect to the use of a getter comprising the claimed amount of nitrogen.

Thus, even if, *arguendo*, one of ordinary skill would have found it obvious to combine Tu with Toia, Nagasawa, and Deguchi, the resultant combination would still fail to include each and every element of the appealed claims. Specifically, the combination would still fail to include a getter comprising the claimed amount of nitrogen.

Appellant also disagrees with and traverses the Office's indication that Tu teaches a getter "provided to a connection conductor connected to the second supply conductor and running alongside the discharge vessel." See Final Office Action dated January 14, 2009, page 9. Contrary to the Office's assertions, Tu does not provide "a getter to a connection conductor connected to the second supply conductor and running alongside the discharge vessel[,"] as recited in claim 5. Rather, Tu welds and/or fixes its getters (elements 31 and 37 in the figures) "to each of the *pinch straps* 30, 36 on opposites sides of the pinch plane." Tu, column 2, lines 40-62 and FIGs. 1, 2 and 7 (emphasis added).

⁴ Appellant notes that ST-101 is described in the specification of this application as a getter alloy which typically contains 20 mbar.ml nitrogen after activation at 750-900°C. Tu however, never discloses activating its getter at that temperature, and focuses instead on removing other impurities with the getter, such as hydrogen and oxygen.

As shown in FIGs 1, 2, and 7 of Tu, pinch straps 30, 36 are disposed at the top and bottom of arc tube 24. Though not expressly stated by Tu, it appears that pinch straps 30 and 36 are non-conductive, as the first and second pinches seal respective first and second lead through for first electrode 28 and second electrode 34. See *id.* at column 3, lines 25-30. Thus, it is clear that Tu does not teach or suggest providing "a getter to a connection conductor connected to the second supply conductor and running alongside the discharge vessel[,"] as recited in claim 5.

Tu also fails to disclose a "discharge vessel having a first and a second mutually opposed neck-shaped portion through which a first and second current supply conductor, respectively, extend to a pair of electrodes arranged in the discharge space, [and] a lamp base . . . supporting the discharge vessel via the first and second current supply conductors . . ." as recited in claims 1 and 11. Indeed in Tu, it appears that first and second frames 40, 48 support arc tube via straps 30 and 36, and do not extend through first and second mutually opposed neck shaped portions of arc tube 24 to a pair of electrodes in a discharge space. See, e.g., Tu, Figs. 1, 2, and 7.

Finally, Tu is silent with respect to a high-pressure discharge lamp (or a method of manufacturing a high-pressure discharge lamp) comprising, *inter alia*, an outer envelop with a volume of "equal to or less than 2cc[,"] as recited in claims 1 and 11.

For at least the foregoing reasons, Toia, Nagasawa, Deguchi, and Tu, whether considered alone or in combination, do not teach or suggest each and every element of independent claims 1 and 11, much less dependent claim 5. Thus, the burden remains on the Office to provide a tenable rationale explaining *why* one of ordinary skill in the art would modify or combine Toia, Nagasawa, Deguchi, and Tu in an attempt to arrive at

the claimed invention, when the references do not teach or suggest such modification/combination or all of the elements of the pending claims. See *KSR*, 82 U.S.P.Q.2d at 1369.

Appellant therefore submits that the 35 U.S.C. § 103(a) rejection of claim 5 as being unpatentable over Toia, Nagasawa, Deguchi and Tu is improper, and should be withdrawn.

III. THE 35 U.S.C. §103(a) REJECTION OF CLAIM 7 AS BEING UNPATENTABLE OVER TOIA IN VIEW OF NAGASAWA, DEGUCHI, AND BARTHELMES IS IMPROPER

The Office alleges that claim 7 is unpatentable over a combination of Toia, Nagasawa, Deguchi, and Barthelmes. See Final Office Action dated January 14, 2009, page 9. Though acknowledging that Toia, Nagasawa, and Deguchi "fail to teach a tube for inserting nitrogen during the manufacturing of the lamp" the Office asserts that Barthelmes cures this deficiency. See *id.* Specifically, the Office states that ". . . Barthelmes teaches the lamp base comprises a tube for providing a nitrogen atmosphere in the outer envelope during manufacturing of the high pressure discharge lamp." *Id.* at 10. From this, the Office reasons that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a tube in the base of the lamp in order to provide nitrogen into the outer envelope of the lamp, because nitrogen serves to remove impurities from the outer envelope, thereby ensuring proper operation of the lamp." *Id.*

Appellant respectfully disagrees with and traverses the Office's position for at least the following reasons.

The deficiencies of Toia, Nagasawa, and Deguchi with respect to independent claims 1 and 11 is described above in section I, and for the sake of brevity will not be repeated. In summary, Appellant maintains that Toia, Nagasawa, and Deguchi, whether considered alone or in combination, do not teach or suggest a high-pressure discharge lamp (or method of manufacturing the same) comprising a "getter comprising at least 2.5 mbar/mil nitrogen" that is "provided in the outer envelope" of a "high-pressure discharge lamp," as claimed, or an outer envelope having the claimed volume.

Barthelmes does not cure the deficiencies of Toia, Nagasawa, and Deguchi. At a minimum, Barthelmes fails to teach or suggest a high-pressure discharge lamp (or method of manufacturing the same) "comprising: . . . a getter . . . comprising at least 2.5 mbar.mil nitrogen[,] as recited in claims 1, and 11. While Barthelmes discloses the use of a getter for the purpose of accepting "any possible remaining contaminants" after the disclosed bulb 22 is evacuated, it does not disclose what types of getter materials are suitable, and certainly does not disclose getters comprising the claimed amount of nitrogen.

Thus, even if, *arguendo*, one of ordinary skill would have found it obvious to combine Toia, Nagasawa, Deguchi and Barthelmes, the resultant combination would still fail to include each and every element of the appealed claims. Specifically, the combination would still fail to include a getter comprising the claimed amount of nitrogen. See claims 1 and 11.

It also appears that Barthelmes fails to disclose several of the structural elements of claims 1 and 11, such as the configuration of the discharge vessel, first and second neck shaped portions, first and second current supply conductors, pair of electrodes

and supporting base. Nor does Barthelmes appear to disclose a high-pressure discharge lamp (or a method of manufacturing a high-pressure discharge lamp) comprising, *inter alia*, an outer envelop with a volume of "equal to or less than 2cc[,] as recited in claims 1 and 11. Thus, Barthelmes provides no information addressing the multiple deficiencies of Toia, Nagasawa, and Deguchi described above.

For at least the foregoing reasons, Toia, Nagasawa, Deguchi, and Barthelmes, whether considered alone or in combination, do not teach or suggest each and every element of independent claims 1 and 11, much less dependent claim 7. Thus, the burden remains on the Office to provide a tenable rationale explaining *why* one of ordinary skill in the art would modify or combine Toia, Nagasawa, Deguchi, and Barthelmes in an attempt to arrive at the claimed invention, when the references do not teach or suggest such modification/combination or all of the elements of the pending claims. See *KSR*, 82 U.S.P.Q.2d at 1369.

Appellant therefore submits that the 35 U.S.C. § 103(a) rejection of claim 7 as being unpatentable over Toia, Nagasawa, Deguchi and Barthelmes is improper, and should be withdrawn.

IV. THE 35 U.S.C. §103(a) REJECTION OF CLAIM 8 AS BEING UNPATENTABLE OVER TOIA IN VIEW OF NAGASAWA, DEGUCHI, BARTHELMES, AND NIIMI IS IMPROPER

The Office alleges that claim 8 is unpatentable over a combination of Toia, Nagasawa, Deguchi, Barthelmes, and Niimi. See Final Office Action dated January 14, 2009, page 10. Specifically, the Office admits that Toia, Nagasawa, Deguchi, and Barthelmes fail to teach a "tube for providing a nitrogen atmosphere" wherein "the tube is made from a metal or from a NiFeCr alloy[,"] as recited in claim 8. See *id.* However,

the Office asserts that Niimi "teaches the tube is made from a metal or from a NiFeCr alloy (abstract; metal -made seamless pipe)." *Id.* From this, the Office reasons that "[i]t would have been obvious to one of ordinary skill in the art . . . to use a metal tube to impart nitrogen into the outer envelope of the lamp, because metal has superior mechanical strength and gastightness." *Id.*

Appellant respectfully disagrees with and traverses the Office's position for at least the following reasons.

The deficiencies of Toia, Nagasawa, Deguchi, and Barthelmes with respect to independent claims 1 and 11 and dependent claim 7 are described above in sections I and III, and for the sake of brevity will not be repeated. In summary, Appellant maintains that at a minimum Toia, Nagasawa, Deguchi, and Barthelmes, whether considered alone or in combination, do not teach or suggest a high-pressure discharge lamp (or method of manufacturing the same) comprising a "getter comprising at least 2.5 mbar/mil nitrogen" that is "provided in the outer envelope" of a "high-pressure discharge lamp," or an outer envelope having the claimed volume. See claims 1 and 11.

Niimi does not cure the deficiencies of Toia, Nagasawa, Deguchi, and Barthelmes. At a minimum, Niimi fails to teach or suggest a high-pressure discharge lamp (or method of manufacturing the same) "comprising: . . . a getter . . . comprising at least 2.5 mbar.mil nitrogen[,] as recited in claims 1, and 11. Indeed, Niimi appears to be completely silent with respect to the use of any getter material in a high-pressure discharge lamp or a method for making a high-pressure discharge lamp.

Thus, even if, *arguendo*, one of ordinary skill would have found it obvious to combine Toia, Nagasawa, Deguchi, Barthelmes, and Niimi, the resultant combination would still fail to include each and every element of the appealed claims. Specifically, the combination would still fail to include a getter comprising the claimed amount of nitrogen. See claims 1 and 11.

It also appears that Niimi fails to disclose several of the structural elements of claims 1 and 11, such as the configuration of the discharge vessel, first and second neck shaped portions, first and second current supply conductors, pair of electrodes and supporting base. Nor does Niimi appear to disclose a high-pressure discharge lamp (or a method of manufacturing a high-pressure discharge lamp) comprising, *inter alia*, an outer envelop with a volume of "equal to or less than 2cc[,] as recited in claims 1 and 11. Thus, Niimi provides no information addressing the multiple deficiencies of Toia, Nagasawa, Deguchi, and Barthelmes described above.

For at least the foregoing reasons, Toia, Nagasawa, Deguchi, Barthelmes, and Niimi whether considered alone or in combination, do not teach or suggest each and every element of independent claims 1 and 11, much less dependent claim 8. Thus, the burden remains on the Office to provide a tenable rationale explaining *why* one of ordinary skill in the art would modify or combine Toia, Nagasawa, Deguchi, Barthelmes, and Niimi in an attempt to arrive at the claimed invention, when the references do not teach or suggest such modification/combination or all of the elements of the pending claims. See *KSR*, 82 U.S.P.Q.2d at 1369.

Appellant therefore submits that the 35 U.S.C. § 103(a) rejection of claim 7 as being unpatentable over Toia, Nagasawa, Deguchi, Barthelmes, and Niimi is improper, and should be withdrawn.

V. CONCLUSION

For the reasons given above, pending claims 1-14 are allowable, and reversal of the Office's rejections are respectfully requested.

To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this Appeal Brief, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to Deposit Account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: June 22, 2009

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Claims Appendix to Appeal Brief Under Rule 41.37(c)(1)(viii)

1. A high-pressure discharge lamp comprising:

an outer envelope in which a discharge vessel is arranged around a longitudinal axis,

the discharge vessel enclosing, in a gastight manner, a discharge space provided with an ionizable filling,

the discharge vessel having a first and a second mutually opposed neck-shaped portion through which a first and a second current supply conductor, respectively, extend to a pair of electrodes arranged in the discharge space,

a lamp base of electrically insulating material supporting the discharge vessel via the first and second current supply conductors,

the lamp base also supporting the outer envelope,

the outer envelope enclosing the first and second current supply conductors,

a getter being provided in the outer envelope,

the outer envelope having a volume equal to or less than 2cc, and

the getter comprising at least 2.5 mbar.mil nitrogen.

2. A high-pressure discharge lamp as claimed in claim 1, wherein the getter comprises at least 5 mbar.mil nitrogen.

3. A high-pressure discharge lamp as claimed in claim 1 or 2, wherein the material of the getter is selected from the group formed by yttrium, tantalum, niobium, titanium, thorium, hafnium, zirconium and vanadium.

4. A high-pressure discharge lamp as claimed in claim 1 or 2, wherein the getter comprises an alloy of zirconium and aluminum or a zirconium-cobalt-mixed metal alloy.
5. A high-pressure discharge lamp as claimed in claim 1, wherein the material of the getter is provided to a connection conductor connected to the second supply conductor and running alongside the discharge vessel.
6. A high-pressure discharge lamp as claimed in claim 1, wherein the outer envelope is free from a sealed exhaust tube.
7. A high-pressure discharge lamp as claimed in claim 1, wherein the lamp base comprises a tube for providing a nitrogen atmosphere in the outer envelope during manufacturing of the high-pressure discharge lamp.
8. A high-pressure discharge lamp as claimed in claim 7, wherein the tube is made from a metal or from a NiFeCr alloy.
9. A high-pressure discharge lamp as claimed in claim 1, wherein the lamp base is made from quartz glass, hard glass, soft glass, glass-ceramic or a ceramic material.
10. A high-pressure discharge lamp as claimed in claim 1, wherein the outer envelope is fastened to the lamp base by an enamel.

11. A method of manufacturing a high-pressure discharge lamp, the compact high-pressure discharge lamp comprising:

an outer envelope in which a discharge vessel is arranged around a longitudinal axis,

the discharge vessel enclosing, in a gastight manner, a discharge space provided with an ionizable filling,

the discharge vessel having a first and a second mutually opposed neck-shaped portion through which a first and a second current supply conductor, respectively, extend to a pair of electrodes arranged in the discharge space,

a lamp base of electronically insulating material supporting the discharge vessel via the first and second current supply conductors,

the lamp base also supporting the outer envelope,

the outer envelope enclosing the first and second current supply conductors,

a getter being provided in the outer envelope,

the outer envelope having a volume equal to or less than 2cc, and

the method including:

activating the getter for reducing the amount of nitrogen in the outer envelope,

and

after activation of the getter comprising at least 2.5 mbar.mil nitrogen.

12. A method of manufacturing a high-pressure discharge lamp as claimed in claim 11, wherein the material of the getter is selected from the group formed by yttrium, tantalum, niobium, titanium, thorium, hafnium, zirconium and vanadium.
13. A method of manufacturing a high-pressure discharge lamp as claimed in claim 11 or 12, wherein the getter is activated by inductive heating.
14. A method of manufacturing a high-pressure discharge lamp as claimed in claim 11 or 12, wherein the getter is active as getter for hydrogen during life of the discharge lamp.

Evidence Appendix to Appeal Brief Under Rule 41.37(c)(1)(ix)

No evidence is being relied upon by Appellant in this appeal.

Related Proceedings Appendix to Appeal Brief Under Rule 41.37(c)(1)(x)

There are no related Appellate proceedings or decisions to be cited in this case.